



Volpe, The National Transportation Systems Center

Center for Infrastructure Systems and Engineering

The Center for Infrastructure Systems and Engineering applies in-depth technical knowledge of surface, marine, and ground-based aviation transportation systems to enhance their safety, operational efficiency, and sustainability. Expertise in the engineering and safety analysis of vehicles, guideways, waterways, ports, and related facilities is applied to a wide variety of modal interface challenges related to design, construction, operation, inspection, maintenance, and overall system safety assurance of transportation systems.



U.S. Department of Transportation
Research and Innovative Technology Administration

John A. Volpe National Transportation Systems Center

What We Do

Structures and Dynamics

The Structures and Dynamics Division maintains and applies expertise in the areas of vehicle guideway interaction, mechanics of wear, fatigue and fracture, soil mechanics, and vehicle impact energy management to support improved performance and safety of the rail transportation system.

Systems Safety and Engineering

The Systems Safety and Engineering Division conducts engineering, research, and analysis to synthesize technical requirements, regulatory information, and program guidance to optimize transportation system performance and safe operations.

Infrastructure Engineering and Deployment

The Infrastructure Engineering and Deployment Division advances transportation innovation by being a leader in infrastructure technology. Our expertise and experience is vast and covers vehicles and vessels, guideways, waterways and ports, surface structures and facilities, and systems. We advance the

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enterprise through development acquisition, modernization, deployment, and sustainment, and we provide analysis, engineering, and project management to implement operational enhancements and improve infrastructure safety and security.

Our Capabilities

- Engineering and systems analysis technical support for the surface, marine, and ground-based aviation modes of transportation with a particular focus on guideways, vehicles and vessels, ports, systems, and facilities
- Analysis and oversight of new concepts and technologies, safety systems, and regulatory compliance

Our Sponsors

- Federal Railroad Administration
- Federal Transit Administration
- Maritime Administration
- Pipeline and Hazardous Materials Safety Administration
- U.S. Air Force
- U.S. Army
- U.S. Coast Guard
- U.S. Department of State
- U.S. Navy

Technical Centers at Volpe

- Transportation Policy and Planning
- Safety Management Systems
- Environmental and Energy Systems
- Transportation Logistics and Security
- Systems Safety and Engineering Division
- Air Traffic Systems and Operations
- Human Factors Research and System Applications
- Advanced Transportation Technologies

Contact Us

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